

<b>X18B SAFETY CHECKLIST</b>			BROOKHAVEN NATIONAL LABORATORY NATIONAL SYNCHROTRON LIGHT SOURCE
<b>Rev: A</b>	<b>Effective: 5/15/04</b>	<b>Page 1 of 1</b>	Number: LS-SCL-0042
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Original signatures on file.

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- ☐ 1. Valid padlock Index and log, no padlocks open.

**FOR ITEMS 2 TO 5 GO TO THE X17 SIDE AND START AT THE FRONT OF BEAM LINE.**

- ☐ 2. Scatter shield covering beampipe as in photo 1.  
☐ 3. Scatter shield covering the fixed aperture and banded as in photo 1.  
☐ 4. Bremsstrahlung shield (BS #1) in place and banded as in photo 1.  
☐ 5. Scatter shield upstream of ion gauge as in photo 1.

**FOR ITEMS 6 TO 26 GO ON THE X19 SIDE OF BEAMLINE AND START UPSTREAM**

- ☐ 6. Scatter shield downstream of ion gauge as in photo 2.  
☐ 7. Exclusion Zone (EZ #1) in place and banded around Water cooled Beryllium window #1 as in photo 2.  
☐ 8. Scatter shield covering Vacuum Bellows #1 as in photo 2.  
☐ 9. Bremsstrahlung shield (BS # 2) in place and banded as in photo 2.  
☐ 10. Exclusion Zone (EZ #2) in place and banded as in photo 2.  
☐ 11. Exclusion Zone (EZ #3) in place and banded as in photo 3.  
☐ 12. Exclusion Zone (EZ #4) in place and banded as in photo 3.  
☐ 13. Bremsstrahlung shield (BS # 3) in place and banded as in photo 3.  
☐ 14. Vacuum Bellows #2 wrapped in lead and banded as in photo 3.  
☐ 15. Viewport covered with leaded Plexiglas and banded as in photo 4.  
☐ 16. Lead Exclusion Zone (EZ #5) in place and banded as in photo 4.  
☐ 17. Bremsstrahlung shield (BS #4) in place and banded as in photo 4.  
☐ 18. Vacuum Bellows #3 wrapped in lead and banded. With scatter shield around beampipe as in photo 4.  
☐ 19. Lead Exclusion Zone (EZ #6) in place and banded as in photo 4.  
☐ 20. Lead Exclusion Zone (EZ #7) in place and banded as in photo 5.  
☐ 21. Bremsstrahlung shield (BS #5) in place and banded as in photo 5.  
☐ 22. Water cooled Beryllium window #2, Slits, Vacuum Bellows #4 wrapped in lead and banded as in photo 5.  
☐ 23. Scatter shield covering the Monochromator, Viewport on monochromator chamber covered with leaded Plexiglas as in photo 6.  
☐ 24. Scatter shield on cross, beampipe, Vacuum Bellows #5 as in photo 6.  
☐ 25. Bremsstrahlung shield (BS #6) (for photon shutter) in place and banded as in photo 7.  
☐ 26. Bremsstrahlung shield (BS #7) between the hutch and photon shutter in place and banded as in photo 7.

**ITEM 27 IS INSIDE OF THE X18B HUTCH**

- ☐ 27. Beam stop inside the hutch in place and secured as in photo 8.

Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

OPCO: \_\_\_\_\_ Date: \_\_\_\_\_